



Advanced Cutting Tools



Thread Milling Tools

METRIC

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EROJET IS A CUTTING TOOLS MANUFACTURER OF THREAD MILLING, THREAD TURNING AND GROOVING TOOLS.

EROJET has a capability of manufacturing high quality cutting tools and at the same time offering delivery, and outstanding customer service. In addition to our extensive line of standard tools, we also manufacture a wide range of special tools according to customer request. The company is certified according to ISO 9001 : 2008 .

THREAD MILLING ADVANTAGES

One tool can be used for right hand and left hand thread. One tool can produce a wide variety of thread diameters of the same pitch. Produces threads with high surface finish, sizes and accuracy. Full thread to the bottom of hole. Small machines can produce large threads due to less spindle torque. Less cutting pressure for thin wall parts. Eliminates the need of removing broken taps.

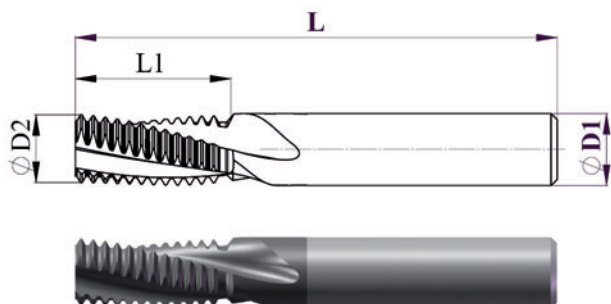


ORDERING CODE - SOLID THREAD MILLING

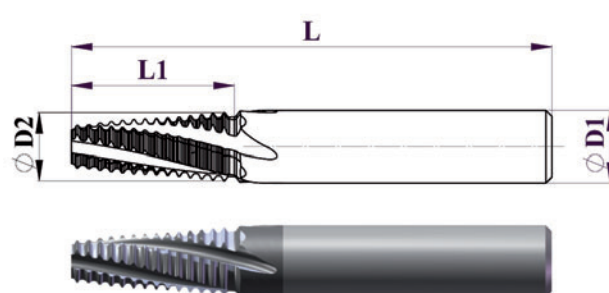
TMG	06	039	L10	0.8		ISO	K520C
SOLID THREAD MILLING INTERNAL TOOLS :	SHANK DIAMETER :	CUTTING DIAMETER :	TOOL CUTTING LENGTH :	PITCH : 0.8 MM		THREAD STANDARD	CARBIDE GRADE :
PARTIAL PROFILE :	Ø 3 MM	Ø 3.9 MM	L10=10 MM	MM	TPI	ISO	K520C
TMP= SINGLE TOOTH	Ø 4					UN	
	Ø 6					W	
FULL PROFILE :	Ø 8					BSPT	
	Ø 10					NPT	
TMC=3 TEETH	Ø 12					NPTF	
TMD = 3 TEETH - HM	Ø 16						
TMG= REGULAR -helical	Ø 20						
TMX= REGULAR -straight							

SOLID THREAD MILLING TOOLS :

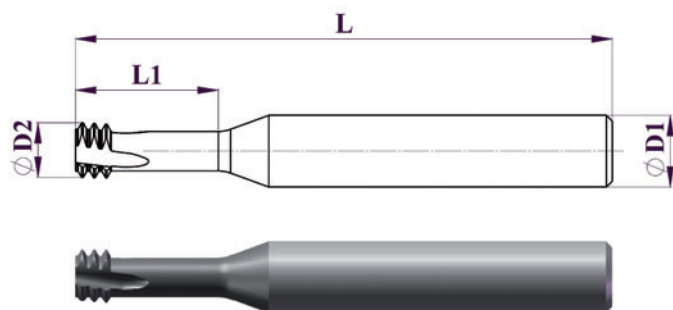
STANDARD – HELICAL FLUTES



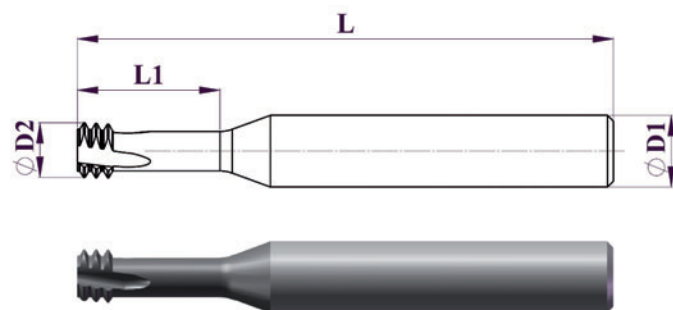
STANDARD TAPER – HELICAL FLUTES



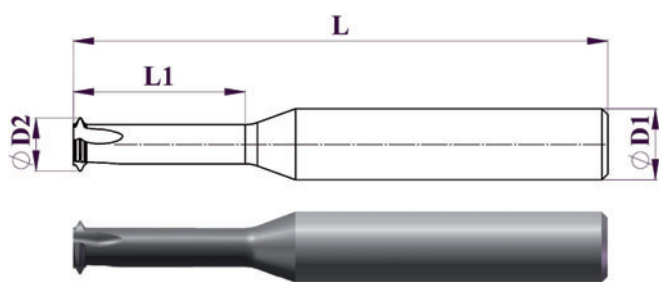
MINIATURE TOOLS – FOR HARD MATERIAL



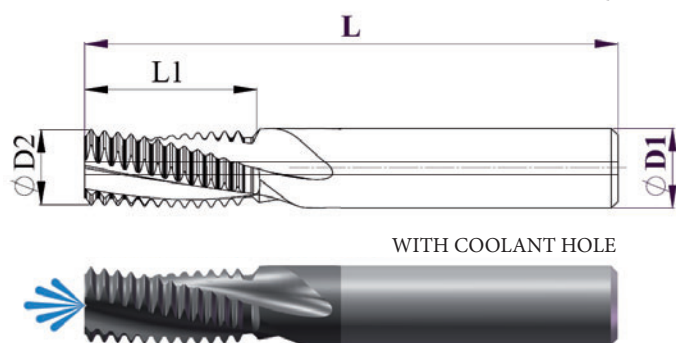
MINIATURE TOOLS – GENERAL PURPOSE



PARTIAL PROFILE

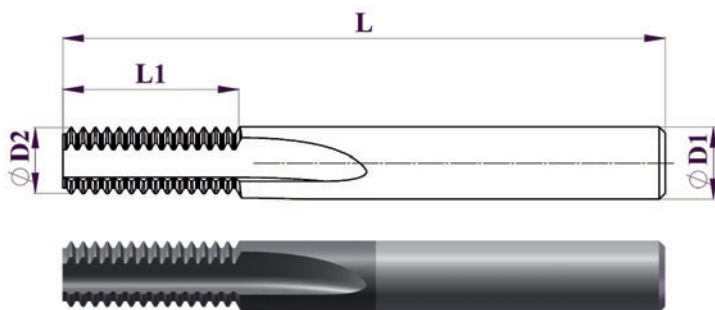


HELICAL FLUTES WITH COOLANT – UPON REQUEST

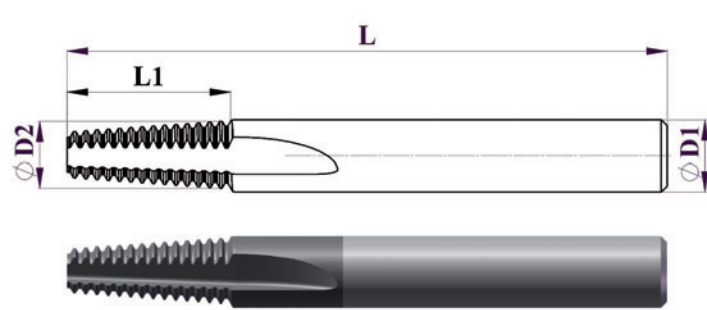


WITH COOLANT HOLE

STANDARD – STRAIGHT FLUTES

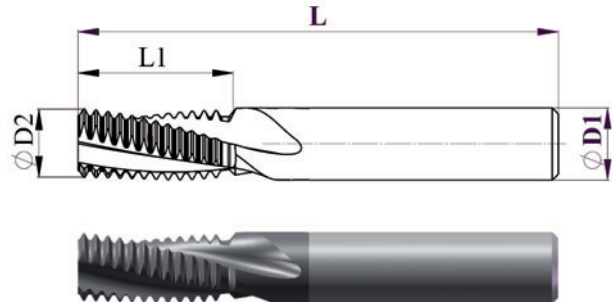
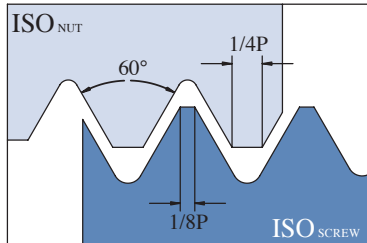


STANDARD TAPER – STRAIGHT FLUTES



ISO METRIC INTERNAL

ISO 965-1:1999-11
DIN13 : 2005-08



HELICAL FLUTES

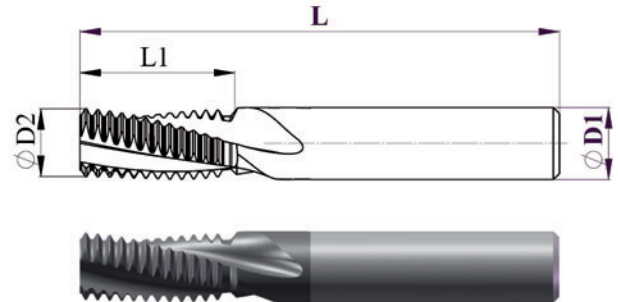
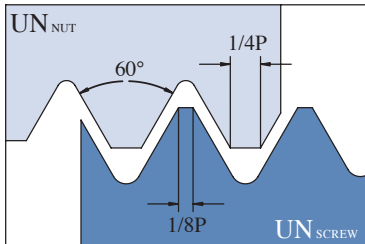
THREAD SIZE		PITCH MM	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
COARSE	FINE							
	M7.0x0.5	0.50	TMG06059L10 0.5ISO	57	10.2	6	5.9	3
M4.5x0.75	M5.0x0.75	0.75	TMG06036L10 0.75ISO	57	10.1	6	3.6	3
	M8.0x0.75	0.75	TMG06059L10 0.75ISO	57	10.8	6	5.9	3
	M10.0x0.75	0.75	TMG08079L15 0.75ISO	63	15.3	8	7.9	4
M5.0x0.8		0.8	TMG06039L10 0.8 ISO	57	10.0	6	3.9	3
M6.0x1.0	M7.0x1.0	1.0	TMG06048L11 1.0ISO	57	11.5	6	4.8	3
	M10.0x1.0	1.0	TMG08079L17 1.0ISO	63	17.5	8	7.9	4
	M12x1.0	1.0	TMG10099L20 1.0ISO	73	20.5	10	9.9	4
M8.0x1.25	M9.0x1.25	1.25	TMG06059L14 1.25ISO	57	14.4	6	5.9	3
M10x1.5	M11.0x1.5	1.5	TMG08079L18 1.5ISO	63	18.5	8	7.9	3
	M13.0x1.5	1.5	TMG10099L21 1.5ISO	73	21.8	10	9.9	4
	M15.0x1.5	1.5	TMG12119L26 1.5ISO	84	26.3	12	11.9	4
	M20x1.5	1.5	TMG16159L35 1.5ISO	105	35.2	16	15.9	6
M12.0x1.75		1.75	TMG10092L21 1.75ISO	73	21.8	10	9.2	3
M14.0x2.0		2.0	TMG10099L25 2.0ISO	73	25.0	10	9.9	3
M16.0x2.0		2.0	TMG12119L27 2.0ISO	84	27.0	12	11.9	4
	M20x2.0	2.0	TMG16159L37 2.0ISO	105	37.0	16	15.9	5
M20.0x2.5		2.5	TMG16159L36 2.5ISO	105	36.3	16	15.9	5
M24.0x3.0	M27.0x3.0	3.0	TMG16159L40 3.0ISO	105	40.5	16	15.9	3
M27x3.0		3.0	TMG20199L43 3.0ISO	105	43.0	20	19.9	4

UN

(UNC, UNF, UNEF)

INTERNAL

ANSI B1.1-1982



HELICAL FLUTES

THREAD SIZE			PITCH TPI	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
COARSE UNC	FINE UNF	EXTRA FINE UNEF							
		5/16	32	TMG06059L14 32UN	57	14.0	6	5.9	3
		3/8	32	TMG08079L18 32UN	63	18.0	8	7.9	4
	1/4		28	TMG06051L12 28UN	57	12.2	6	5.1	3
		7/16-1/2	28	TMG08079L15 28UN	63	15.8	8	7.9	4
	5/16		24	TMG06059L10 24UN	57	10.8	6	5.9	3
	3/8		24	TMG08079L15 24UN	63	15.3	8	7.9	4
	9/16-5/8		24	TMG12119L22 24UN	84	22.7	12	11.9	4
1/4			20	TMG06048L12 20UN	57	12.0	6	4.8	3
	7/16		20	TMG08079L19 20UN	63	19.7	8	7.9	3
	1/2		20	TMG10099L22 20UN	73	22.5	10	9.9	4
		3/4-1	20	TMG12119L26 20UN	84	26.0	12	11.9	4
5/16			18	TMG06057L16 18UN	57	16.0	6	5.7	3
	9/16-5/8		18	TMG10099L23 18UN	73	23.5	10	9.9	4
3/8			16	TMG08068L18 16UN	63	18.2	8	6.8	3
	3/4		16	TMG12119L26 16UN	84	26.2	12	11.9	4
7/16			14	TMG08078L20 14UN	63	20.8	8	7.8	3
	7/8		14	TMG12119L24 14UN	84	24.5	12	11.9	4
1/2			13	TMG10093L24 13UN	73	24.4	10	9.3	3
9/16			12	TMG12106L26 12UN	84	26.4	12	10.6	4
	1		12	TMG16159L39 12UN	105	39.1	16	15.9	5
5/8			11	TMG12115L31 11UN	84	31.1	12	11.5	3
3/4			10	TMG16143L36 10UN	105	36.8	16	14.3	4
7/8			9	TMG16159L40 9UN	105	40.9	16	15.9	4
1			8	TMG20197L42 8UN	105	42.8	20	19.7	4

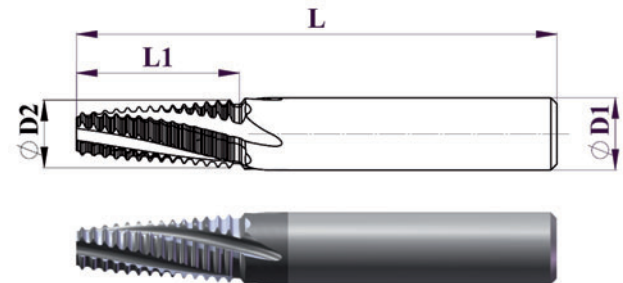
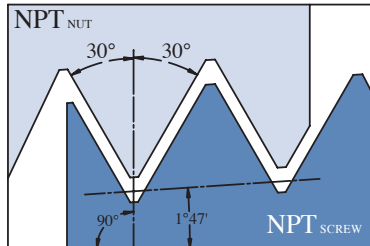
Thread Milling Tools



NPT

INTERNAL / EXTERNAL

ANSI/ASME B 1.20.1-1983



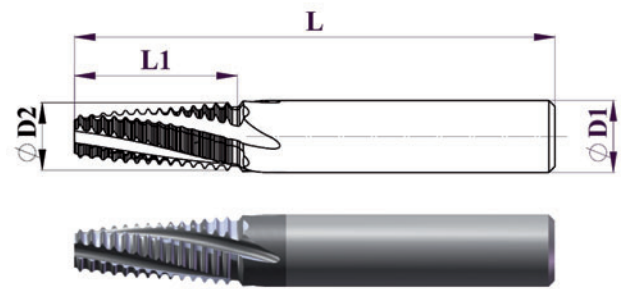
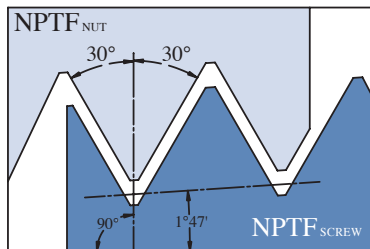
HELICAL FLUTES

THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
1/16	27	TMG06059L09 27 NPT	57	9.8	6	5.9	3
1/8	27	TMG08077L10 27 NPT	63	10.9	8	7.7	3
1/4-3/8	18	TMG10099L16 18 NPT	73	16.4	10	9.9	4
1/2	14	TMG12119L20 14 NPT	84	20.8	12	11.9	4
1-2	11.5	TMG20199L29 11.5 NPT	105	29.7	20	19.9	4
2 1/2-6	8	TMG20199L38 8 NPT	105	38.1	20	19.9	4

NPTF

INTERNAL / EXTERNAL

ANSI B 1.20.3-1976



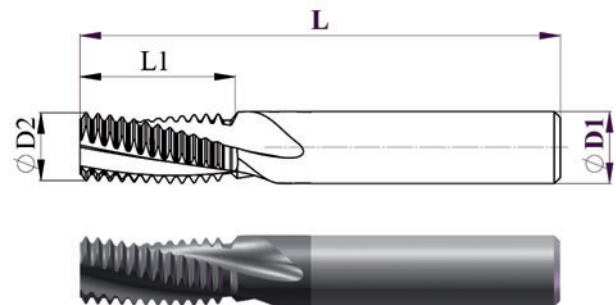
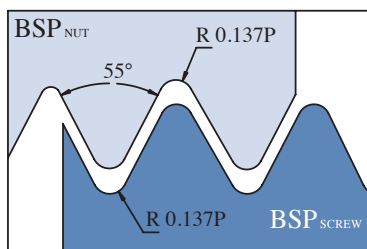
HELICAL FLUTES

THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
1/16	27	TMG06059L09 27 NPTF	57	9.9	6	5.9	3
1/8	27	TMG08077L10 27 NPTF	63	10.8	8	7.7	3
1/4-3/8	18	TMG10099L16 18 NPTF	73	16.2	10	9.9	4
1/2	14	TMG12119L20 14 NPTF	84	20.8	12	11.9	4
1-2	11.5	TMG20199L29 11.5 NPTF	105	29.7	20	19.9	4
2 1/2-6	8	TMG20199L38 8 NPTF	105	38.1	20	19.9	4

BSP(G)

INTERNAL / EXTERNAL

B.S.84: 1956
ISO 228-1: 1994



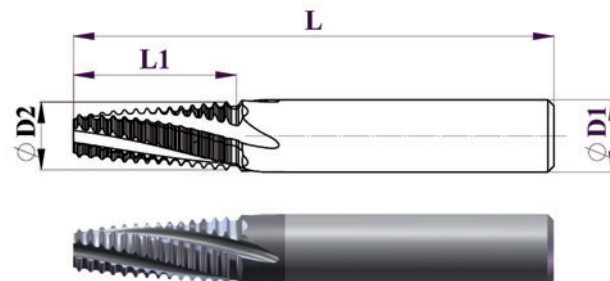
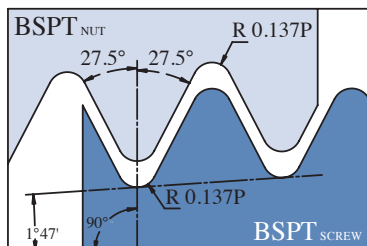
HELICAL FLUTES

THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
1/16	28	TMG06059L11 28 BSP	57	11.3	6	5.9	3
1/8	28	TMG08079L14 28 BSP	63	14.0	8	7.9	3
1/4-3/8	19	TMG10099L16 19 BSP	73	16.6	10	9.9	4
1/2-7/8	14	TMG12119L22 14 BSP	84	22.7	12	11.9	4
1-2	11	TMG16159L32 11 BSP	105	32.1	16	15.9	4
1-6	11	TMG20199L40 11 BSP	105	40.4	20	19.9	5

BSPT(Rc)

INTERNAL / EXTERNAL

B.S. 21:1985

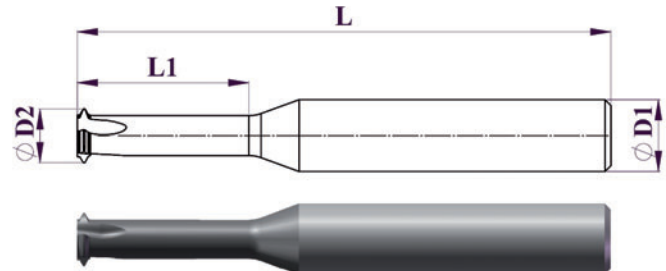
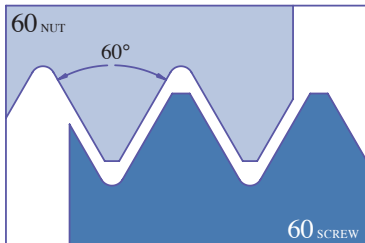


HELICAL FLUTES

THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	N _o OF FLUTES
1/16	28	TMG06059L11 28 BSPT	57	11.3	6	5.9	3
1/8	28	TMG08079L14 28 BSPT	63	14.0	8	7.9	3
1/4-3/8	19	TMG10099L16 19 BSPT	73	16.6	10	9.9	4
1/2-7/8	14	TMG12119L22 14 BSPT	84	22.7	12	11.9	4
1-2	11	TMG16159L32 11 BSPT	105	32.1	16	15.9	4
1-6	11	TMG20199L40 11 BSPT	105	40.4	20	19.9	5

PARTIAL PROFILE 60°

INTERNAL / EXTERNAL



PITCH RANGE		ORDERING CODE	L	L1	D1	D2	No OF FLUTES	MIN. HOLE DIAMETER
MM	TPI							
0.35-0.6	72-40	TMP03019L6 P60	39	6	3	1.95	3	2.0
0.5-0.8	48-32	TMP03024L7 P60	39	7.7	3	2.45	3	2.6
0.5-0.8	48-32	TMP04031L10 P60	51	10	4	3.15	3	3.3
0.5-1.0	48-24	TMP0404L12 P60	51	12	4	4.0	3	4.2
0.5-1.25	48-20	TMP06047L15 P60	57	15	6	4.7	3	4.9
0.5-1.25	48-20	TMP06060L18 P60	57	18	6	6.0	3	6.3
0.75-1.5	32-16	TMP0808L24 P60	63	24	8	8.0	3	8.3
1.0-2.5	24-10	TMP10100L30 P60	73	30	10	10	4	10.4
1.0-2.5	24-10	TMP12120L36 P60	84	36	12	12	4	12.5

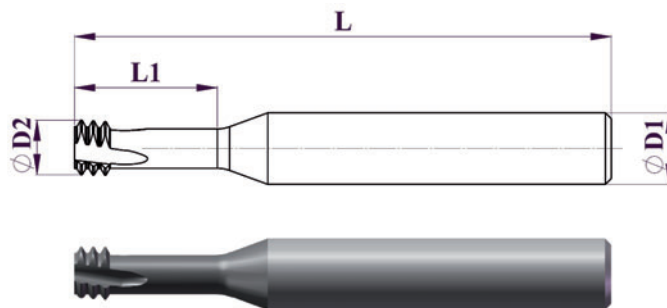
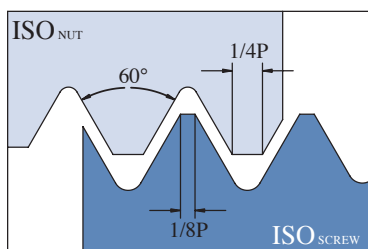
SAME TOOL CAN BE USED FOR THE FOLLOWING OPERATIONS :

1. THREAD MILLING OF EXTERNAL OR INTERNAL THREAD.
2. THREAD MILLING OF ISO AND UN STANDARDS.
2. CHAMFERING, BACK CHAMFERING, DEBURRING.
3. MILLING OF “ V ” GROOVES.

MINIATURE TOOLS ISO METRIC

INTERNAL

ISO 965-1:1999-11
DIN13 : 2005-08



THREAD LENGTH – UP TO 2D

D = NOMINAL THREAD SIZE

THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
M1.6x0.35	0.35	TMC03012L3 0.35ISO	39	3.3	3	1.20	3
M2.0x0.4	0.4	TMC03015L4 0.4 ISO	39	4.4	3	1.54	3
M2.2x0.45	0.45	TMC03016L4 0.45 ISO	39	4.8	3	1.63	3
M2.5x0.45	0.45	TMC04019L5 0.45 ISO	51	5.3	4	1.96	3
M3.0x0.5	0.5	TMC04024L6 0.5 ISO	51	6.4	4	2.40	3
M3.5x0.6	0.6	TMC04027L7 0.6 ISO	51	7.4	4	2.75	3
M4.0x0.7	0.7	TMC06031L8 0.7 ISO	57	8.6	6	3.15	3
M5.0x0.8	0.8	TMC06040L12 0.8 ISO	57	12.0	6	4.00	3
M6.0x1.0	1.0	TMC06047L13 1.0 ISO	57	13.0	6	4.75	3
M8.0x1.25	1.25	TMC06059L17 1.25 ISO	57	17.3	6	5.95	3
M10.0x1.5	1.5	TMC08079L22 1.5 ISO	63	22.0	8	7.90	3
M12.0x1.75	1.75	TMC10094L25 1.75 ISO	73	25.5	10	9.40	3
M14x2.0	2.0	TMC10099L29 2.0ISO	73	29.0	10	9.95	3
M16x2.0	2.0	TMC12119L32 2.0 ISO	84	33.0	12	11.95	4
M20X2.5	2.5	TMC16159L42 2.5ISO	105	42.0	16	15.90	5

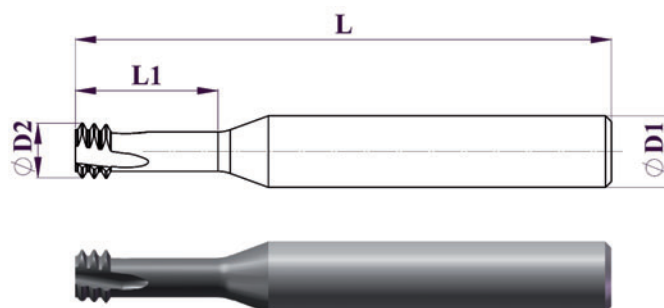
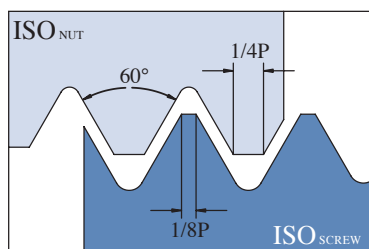
Thread Milling Tools



MINIATURE TOOLS ISO METRIC

INTERNAL

ISO 965-1:1999-11
DIN13 : 2005-08



THREAD LENGTH – UP TO 3D

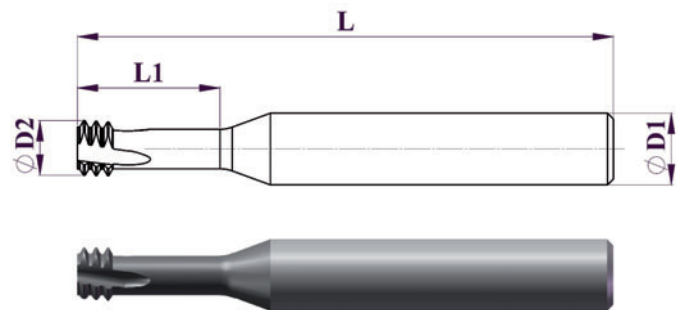
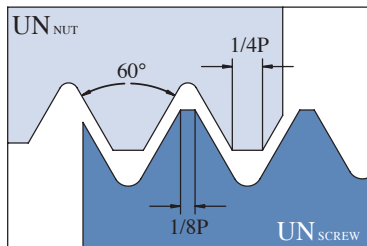
D = NOMINAL THREAD SIZE

THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
M1.4x0.3	0.3	TMC03010L3 0.3ISO	39	3.9	3	1.06	3
M1.6x0.35	0.35	TMC03012L5 0.35 ISO	39	5.1	3	1.20	3
M2.0x0.4	0.4	TMC03015L6 0.4 ISO	39	6.1	3	1.54	3
M2.5x0.45	0.45	TMC04019L7 0.45 ISO	39	7.6	4	1.96	3
M3.0x0.5	0.5	TMC04024L9 0. 5 ISO	51	9.3	4	2.40	3
M4.0x0.7	0.7	TMC06031L12 0.7 ISO	51	12.4	6	3.15	3
M5.0x0.8	0.8	TMC06040L15 0.8 ISO	57	15.6	6	4.00	3
M6.0x1.0	1.0	TMC06047L19 1.0 ISO	57	19.0	6	4.75	3
M8.0x1.25	1.25	TMC06059L24 1.25 ISO	57	24.3	6	5.95	3
M10x1.5	1.5	TMC08079L31 1.5 ISO	63	31.0	8	7.90	3

MINIATURE TOOLS UN

INTERNAL

ANSI B1.1-1982



THREAD LENGTH – UP TO 2D

D = NOMINAL THREAD SIZE

THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
COARSE UNC	FINE UNF							
	1-72UNF	72	TMC03014L3 72 UN	39	3.8	3	1.44	3
1-64UNC	2-64UNF	64	TMC03014L3 64 UN	39	3.9	3	1.40	3
2-56UNC	3-56UNF	56	TMC03016L4 56 UN	39	4.6	3	1.66	3
3-48UNC	4-48UNF	48	TMC04018L5 48 UN	51	5.4	4	1.88	3
4-40UNC		40	TMC04021L6 40 UN	51	6.2	4	2.12	3
5-40UNC	6-40UNF	40	TMC04024L7 40 UN	51	7.1	4	2.46	3
	8-36UNF	36	TMC04033L8 36 UN	51	8.8	4	3.31	3
6-32UNC		32	TMC04025L7 32 UN	51	7.3	4	2.57	3
8-32UNC	10-32UNF	32	TMC06032L10 32 UN	57	10.1	6	3.22	3
	1/4-28UNF	28	TMC06052L14 28 UN	57	14.0	6	5.20	3
10-24UNC		24	TMC06035L10 24 UN	57	10.4	6	3.55	3
	5/16-24UNF	24	TMC08066L16 24 UN	63	16.7	8	6.65	3
1/4-20UNC	7/16-20UNF	20	TMC06048L13 20UN	57	13.7	6	4.85	3
	7/16-20UNF	20	TMC08079L24 20 UN	63	24.0	8	7.95	3
5/16-18UNC		18	TMC06059L16 18UN	57	16.5	6	5.95	3
3/8-16UNC		16	TMC08069L21 16UN	63	21.0	8	6.90	3
7/16-14UNC		14	TMC08079L23 14 UN	63	23.5	8	7.95	3
1/2-13UNC		13	TMC10093L2713 UN	73	27.0	10	9.30	3
9/16-12UNC		12	TMC10099L29 12UN	63	29.0	10	9.95	3
5/8-11UNC		11	TMC12115L33 11UN	84	33.0	12	11.50	3

Thread Milling Tools

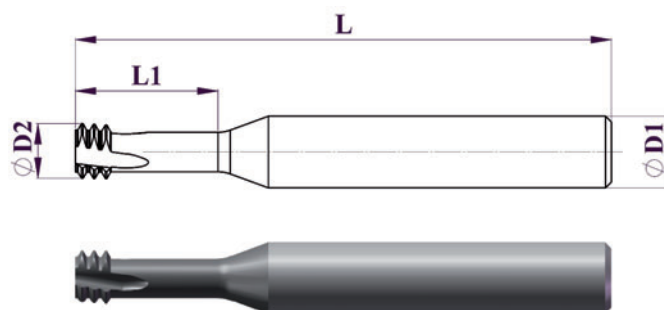
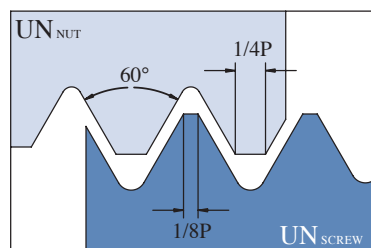


MINIATURE TOOLS

UN

INTERNAL

ANSI B1.1-1982



THREAD LENGTH – UP TO 3D

D = NOMINAL THREAD SIZE

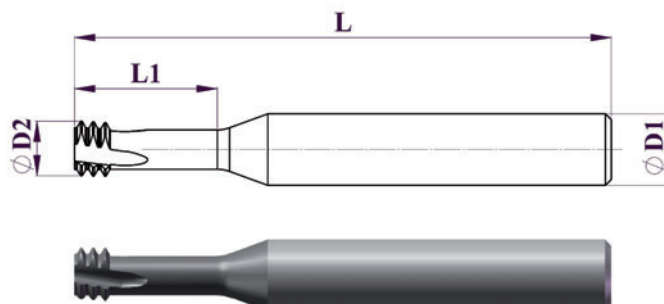
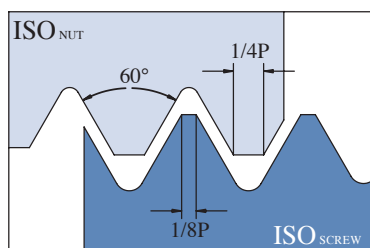
THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
COARSE UNC	FINE UNF							
	0-80UNF	80	TMC03011L3 80UN	39	3.9	3	1.18	3
	1-72UNF	72	TMC03014L5 72 UN	39	5.8	3	1.44	3
2-56UNC	3-56UNF	56	TMC03016L6 56 UN	39	6.8	3	1.66	3
4-40UNC		40	TMC04021L8 40 UN	51	8.1	4	2.12	3
5-40UNC	6-40UNC	40	TMC04024L9 40 UN	51	9.8	4	2.46	3
6-32UNC		32	TMC04025L10 32 UN	51	10.7	4	2.57	3
8-32UNC	10-32UNF	32	TMC06032L12 32 UN	57	12.7	6	3.22	3
	1/4-28UNF	28	TMC06052L19 28 UN	57	19.3	6	5.20	3
	5/16-24UNF	24	TMC08066L24 24 UN	63	24.2	8	6.65	3
1/4-20UNC	7/16-20UNF	20	TMC06048L19 20UN	57	19.4	6	4.85	3

MINIATURE TOOLS FOR HARD MATERIALS – UP TO 62 HRc

ISO METRIC INTERNAL

ISO 965-1:1999-11

DIN13 : 2005-08



THREAD LENGTH – UP TO 2D

D = NOMINAL THREAD SIZE

THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO OF FLUTES
M1.6x0.35	0.35	TMD06012L3 0.35ISO	57	3.3	6	1.20	3
M2.0x0.4	0.4	TMD06015L4 0.4 ISO	57	4.4	6	1.54	3
M2.2x0.45	0.45	TMD06016L4 0.45 ISO	57	4.8	6	1.63	3
M2.5x0.45	0.45	TMD06019L5 0.45 ISO	57	5.3	6	1.96	3
M3.0x0.5	0.5	TMD06024L6 0.5 ISO	57	6.4	6	2.40	3
M3.5x0.6	0.6	TMD06027L7 0.6 ISO	57	7.4	6	2.75	3
M4.0x0.7	0.7	TMD06031L8 0.7 ISO	57	8.6	6	3.15	3
M5.0x0.8	0.8	TMD06040L12 0.8 ISO	57	12.0	6	4.00	3
M6.0x1.0	1.0	TMD06047L13 1.0 ISO	57	13.0	6	4.75	3
M8.0x1.25	1.25	TMD06059L17 1.25 ISO	57	17.3	6	5.95	3
M10.0x1.5	1.5	TMD08079L22 1.5 ISO	63	22.0	8	7.90	3

THREAD LENGTH – UP TO 3D

THREAD SIZE	PITCH MM	ORDERING CODE	L	L1	D1	D2	NO OF FLUTES
M1.6x0.35	0.35	TMD06012L5 0.35 ISO	57	5.1	6	1.20	3
M2.0x0.4	0.4	TMD06015L6 0.4 ISO	57	6.1	6	1.54	3
M2.5x0.45	0.45	TMD06019L7 0.45 ISO	57	7.6	6	1.96	3
M3.0x0.5	0.5	TMD06024L9 0.5 ISO	57	9.3	6	2.40	3
M4.0x0.7	0.7	TMD06031L12 0.7 ISO	57	12.4	6	3.15	3
M5.0x0.8	0.8	TMD06040L15 0.8 ISO	57	15.6	6	4.00	3
M6.0x1.0	1.0	TMD06047L19 1.0 ISO	57	19.0	6	4.75	3
M8.0x1.25	1.25	TMD06059L24 1.25 ISO	57	24.3	6	5.95	3

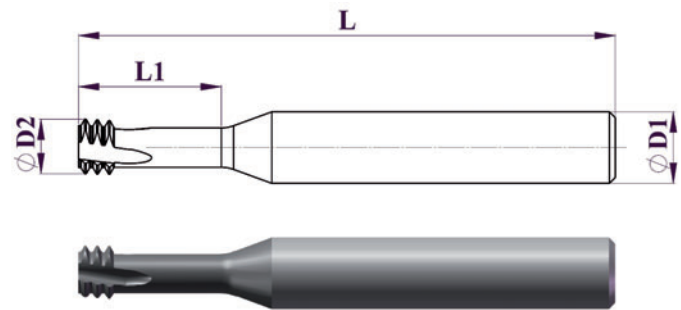
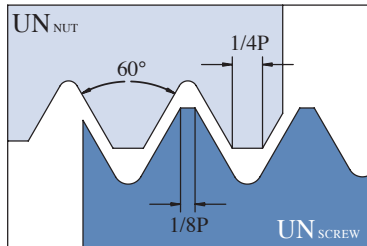
Thread Milling Tools



MINIATURE TOOLS FOR HARD MATERIALS – UP TO 62 HRC

UN INTERNAL

ANSI B1.1-1982



THREAD LENGTH – UP TO 2D D = NOMINAL THREAD SIZE

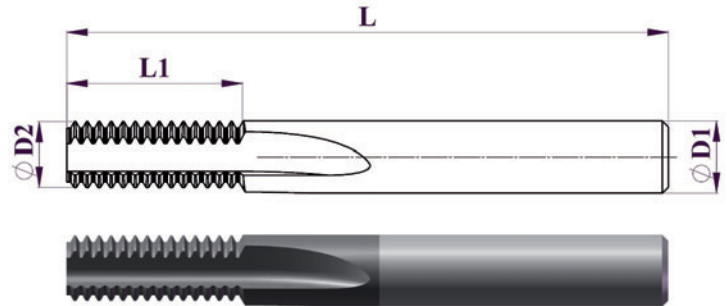
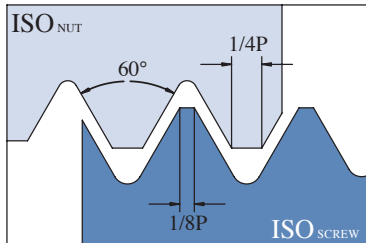
THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
COARSE UNC	FINE UNF							
	1-72UNF	72	TMD06014L3 72 UN	57	3.8	6	1.44	3
1-64UNC	2-64UNF	64	TMD06014L3 64 UN	57	3.9	6	1.40	3
2-56UNC	3-56UNF	56	TMD06016L4 56 UN	57	4.6	6	1.66	3
3-48UNC	4-48UNC	48	TMD06018L5 48 UN	57	5.4	6	1.88	3
4-40UNC		40	TMD06021L6 40 UN	57	6.2	6	2.12	3
5-40UNC	6-40UNC	40	TMD06024L7 40 UN	57	7.1	6	2.46	3
	8-36UNF	36	TMD06033L8 36 UN	57	8.8	6	3.31	3
6-32UNC		32	TMD06025L7 32 UN	57	7.8	6	2.57	3
8-32UNC	10-32UNF	32	TMD06032L10 32 UN	57	10.3	6	3.22	3
	1/4-28UNF	28	TMD06052L14 28 UN	57	14.0	6	5.20	3
10-24UNC		24	TMD06035L10 24 UN	57	10.4	6	3.55	3
	5/16-24UNF	24	TMD08066L16 24 UN	64	16.7	8	6.65	3
1/4-20UNC	7/16-20UNF	20	TMD06048L13 20UN	57	13.7	6	4.85	3
	7/16-20UNF	20	TMD08079L24 20 UN	64	24.0	8	7.95	3
5/16-UNC		18	TMD06059L16 18UN	57	16.5	6	5.95	3
3/8-UNC		16	TMD08069L20 16UN	63	20.0	8	6.90	3
7/16-14UNC		14	TMD08079L5 14 UN	63	23.5	8	7.95	3

THREAD LENGTH – UP TO 3D

THREAD SIZE		PITCH TPI	ORDERING CODE	L	L1	D	D1	No OF FLUTES
COARSE UNC	FINE UNF							
	1-72UNF	72	TMD06014L5 72 UN	57	5.8	6	1.44	3
5-40UNC	6-40UNC	40	TMD06024L9 40 UN	57	9.8	6	2.46	3
8-32UNC	10-32UNF	32	TMD06032L12 32 UN	57	12.7	6	3.22	3
	1/4-28UNF	28	TMD06052L19 28 UN	57	19.3	6	5.20	3
	5/16-24UNF	24	TMD08066L24 24 UN	63	24.2	8	6.65	3
1/4-20UNC	7/16-20UNF	20	TMD06048L19 20UN	57	19.4	6	4.85	3

ISO METRIC INTERNAL

ISO 965-1:1999-11
DIN13 : 2005-08



STRAIGHT FLUTES

THREAD SIZE		PITCH MM	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
COARSE	FINE							
	M8.0X0.75	0.75	TMX06059L10 0.75ISO	57	10.8	6	5.9	3
M5.0x0.8		0.8	TMX06039L10 0.8 ISO	57	10.0	6	3.9	3
M6.0x1.0	M7.0x1.0	1.0	TMX06048L11 1.0ISO	57	11.5	6	4.8	3
	M10.0x1.0	1.0	TMX08079L17 1.0ISO	63	17.5	8	7.9	4
	M12x1.0	1.0	TMX10099L20 1.0ISO	73	20.5	10	9.9	4
M8.0x1.25	M9.0x1.25	1.25	TMX06059L14 1.25ISO	57	14.4	6	5.9	3
M10x1.5	M11.0x1.5	1.5	TMX08079L18 1.5ISO	63	18.5	8	7.9	3
	M13.0x1.5	1.5	TMX10099L21 1.5ISO	73	21.8	10	9.9	4
	M15.0x1.5	1.5	TMX12119L26 1.5ISO	84	26.3	12	11.9	4
M12.0x1.75		1.75	TMX08079L18 1.75ISO	64	18.0	8	7.9	3
M14.0x2.0		2.0	TMX10099L25 2.0ISO	73	25.0	10	9.9	3
M16.0x2.0		2.0	TMX12119L27 2.0ISO	84	27.0	12	11.9	4
M20.0x2.5		2.5	TMX12119L30 2.5ISO	84	30.0	12	11.9	4
M24.0x3.0	M27.0x3.0	3.0	TMX16159L40 3.0ISO	105	40.5	16	15.9	4

Thread Milling Tools

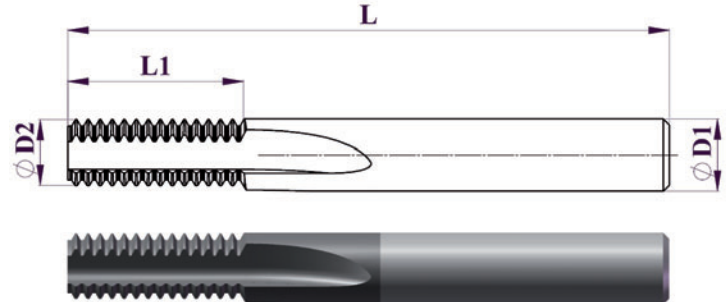
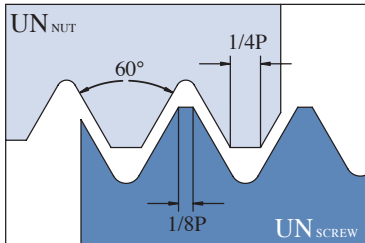


UN

(UNC, UNF, UNEF)

INTERNAL

ANSI B1.1-1982



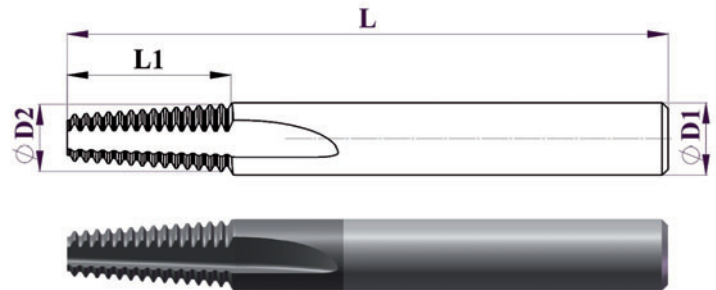
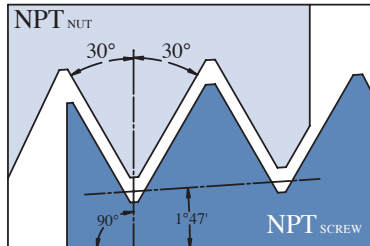
STRAIGHT FLUTES

THREAD SIZE			PITCH TPI	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
COARSE UNC	FINE UNF	EXTRA FINE UNEF							
		5/16	32	TMX06059L14 32UN	57	14.0	6	5.9	3
	1/4		28	TMX06051L12 28UN	57	12.2	6	5.1	3
		7/16-1/2	28	TMX08079L15 28UN	63	15.8	8	7.9	4
	5/16		24	TMX06059L10 24UN	57	10.8	6	5.9	3
1/4			20	TMX06048L12 20UN	57	12.0	6	4.8	3
	7/16		20	TMX08079L19 20UN	63	19.7	8	7.9	3
	1/2		20	TMX10099L17 20UN	73	17.5	10	9.9	4
5/16			18	TMX06057L16 18UN	57	16.0	6	5.7	3
	9/16-5/8		18	TMX08079L18 18UN	63	18.5	8	7.9	3
3/8			16	TMX08068L18 16UN	63	18.2	8	6.8	3
	3/4		16	TMX12119L26 16UN	84	26.2	12	11.9	4
7/16			14	TMX08078L20 14UN	63	20.8	8	7.8	3
	7/8		14	TMX12119L24 14UN	84	24.5	12	11.9	4
1/2			13	TMX10093L24 13UN	73	24.4	10	9.3	3
9/16			12	TMX12119L27 12UN	84	26.4	12	10.6	4
	1		12	TMX16159L39 12UN	105	39.1	16	15.9	5
5/8			11	TMX12115L31 11UN	84	31.1	12	11.5	4
3/4			10	TMX16143L36 10UN	105	36.8	16	14.3	4
7/8			9	TMX16159L40 9UN	105	40.9	16	15.9	4
1			8	TMX20197L39 8UN	105	39.7	20	19.7	4

NPT

INTERNAL / EXTERNAL

ANSI/ASME B 1.20.1-1983



STRAIGHT FLUTES

THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	Nº OF FLUTES
1/16-1/8	27	TMX06059L09 27 NPT	57	9.8	6	5.9	3
1/4-3/8	18	TMX10099L16 18 NPT	73	16.2	10	9.9	4
1/2	14	TMX12119L20 14 NPT	83	20.8	12	11.9	4
1-2	11.5	TMX20199L29 11.5 NPT	105	29.7	20	19.9	4
2 1/2-6	8	TMX20199L38 8 NPT	105	38.1	20	19.9	4

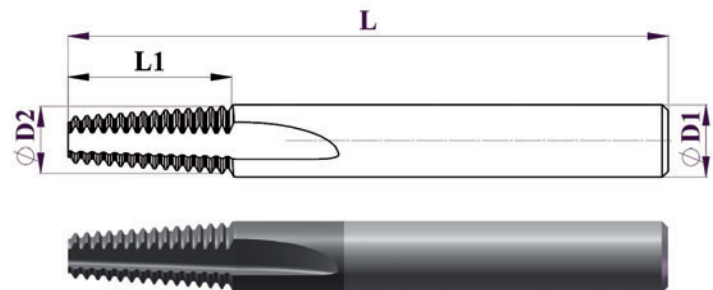
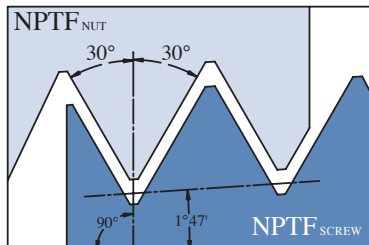
Thread Milling Tools



NPTF

INTERNAL / EXTERNAL

ANSI B 1.20.3-1976



STRAIGHT FLUTES

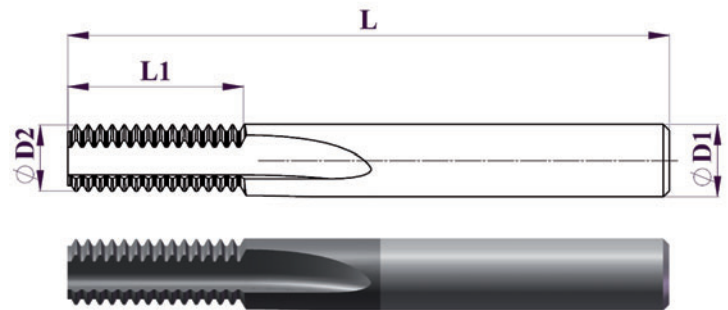
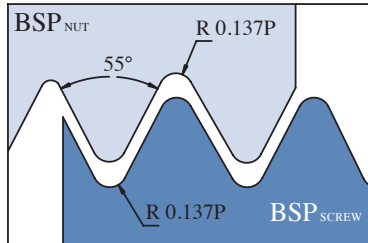
THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
1/16-1/8	27	TMX06059L09 27 NPTF	57	9.9	6	5.9	3
1/4-3/8	18	TMX10099L16 18 NPTF	73	16.2	10	9.9	4
1/2	14	TMX12119L20 14 NPTF	83	20.8	12	11.9	4
1-2	11.5	TMX20199L29 11.5 NPTF	105	29.7	20	19.9	4
2 1/2-6	8	TMX20199L38 8 NPTF	105	38.1	20	19.9	4

BSP(G)

INTERNAL / EXTERNAL

B.S.84: 1956

ISO 228-1: 1994



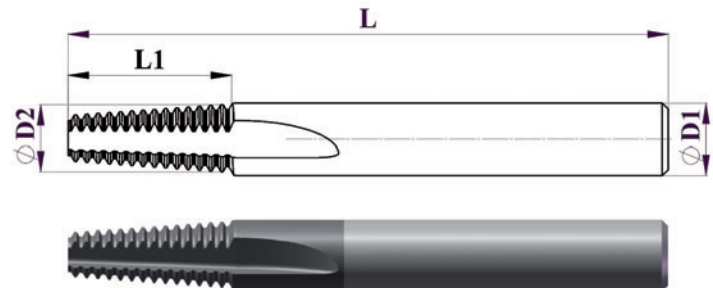
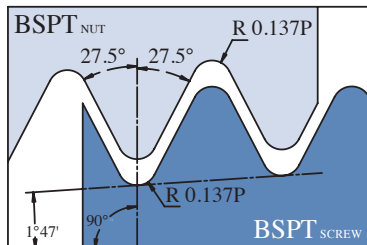
STRAIGHT FLUTES

THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	No OF FLUTES
1/16-1/8	28	TMX06059L11 28 BSP	57	11.3	6	5.9	3
1/4-3/8	19	TMX10099L16 19 BSP	73	16.6	10	9.9	4
1/2-7/8	14	TMX12119L22 14 BSP	83	22.7	12	11.9	4
1-2	11	TMX16159L32 11 BSP	105	32.1	16	15.9	4

BSPT(Rc)

INTERNAL / EXTERNAL

B.S. 21: 1985



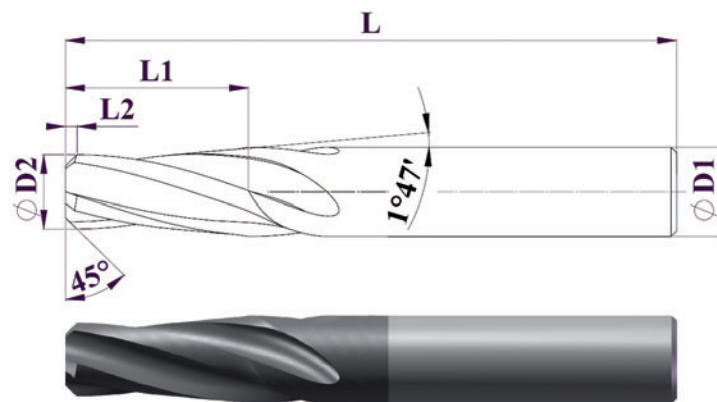
STRAIGHT FLUTES

THREAD SIZE	PITCH TPI	ORDERING CODE	L	L1	D1	D2	N _o OF FLUTES
1/16-1/8	28	TMX06059L11 28 BSPT	57	11.3	6	5.9	3
1/4-3/8	19	TMX10099L16 19 BSPT	73	16.6	10	9.9	4
1/2-7/8	14	TMX12119L22 14 BSPT	83	22.7	12	11.9	4
1-2	11	TMX16159L32 11 BSPT	105	32.1	16	15.9	4

TAPER END MILL & 45° CHAMFER

(BSPT, NPT, NPTF)

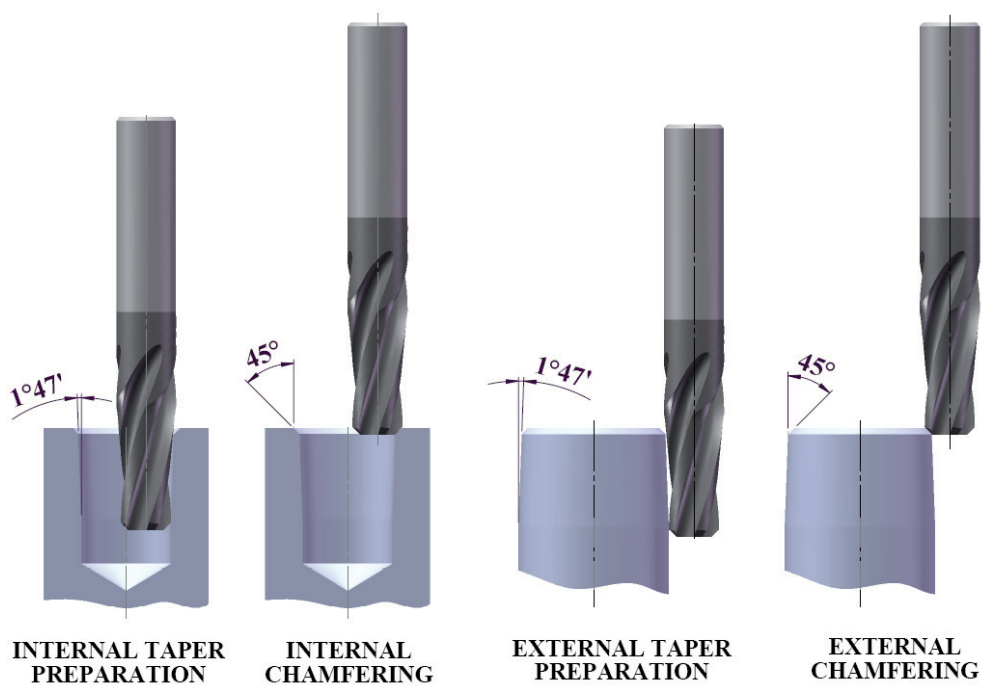
INTERNAL / EXTERNAL



ORDERING CODE	D1	D2	L	L1	L2	Nº OF FLUTES
PM0605L15	6	5	58	15	1.0	4
PM1084L25	10	8.4	73	25	1.4	4
PM1299L33	12	9.9	84	33	1.8	4

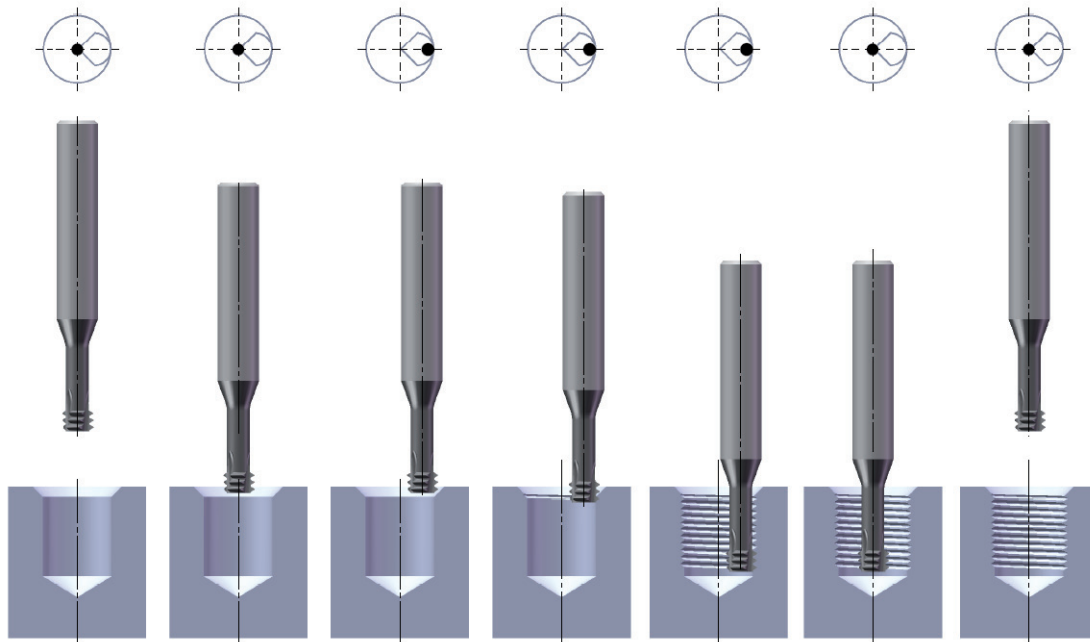
SAME TOOL CAN BE USED FOR THE FOLLOWING OPERATIONS:

1. CONIC MILLING PREPARATION FOR CONIC THREADS (EXTERNAL & INTERNAL).
2. CHAMFERING



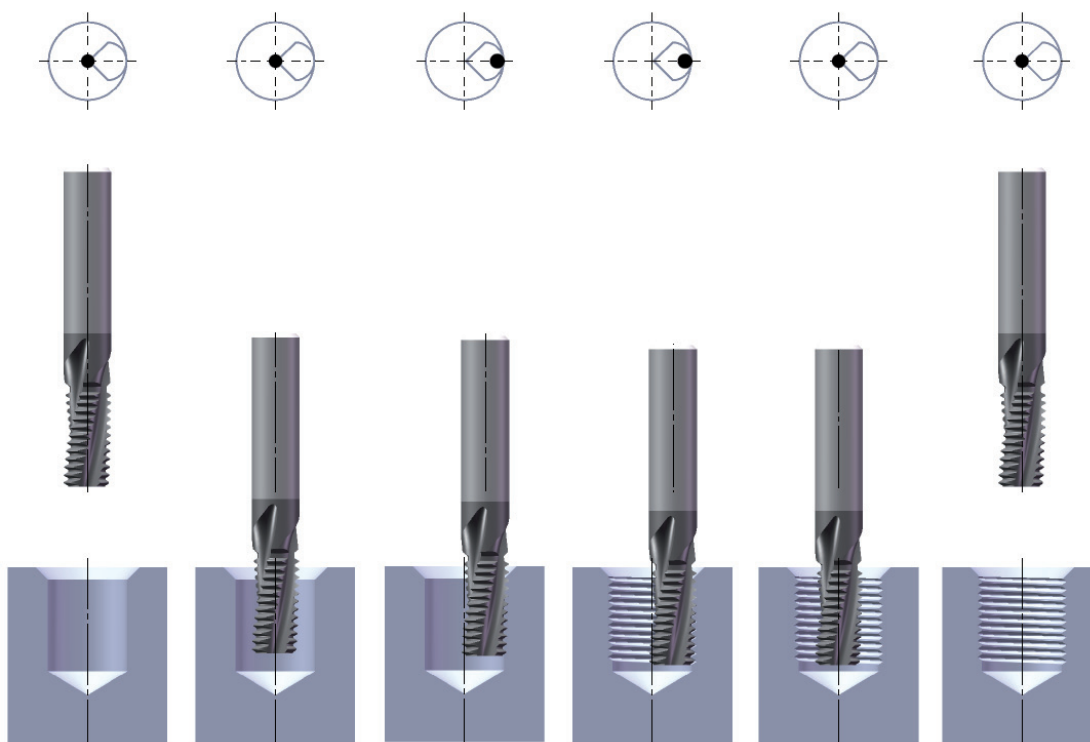
THREAD MILLING CYCLE

(TMC, TMD TYPES)



THREAD MILLING CYCLE

(TMG, TMX TYPES)



TECHNICAL SECTION MACHINING CONDITIONS

CARBIDE GRADE : K520C

AN ADVANCED PVD TiAlN COATED GRADE OVER A TOUGH WEAR-RESISTANT SUBMICRON SUBSTRATE FOR GENERAL PURPOSE MACHINING OF STEEL, STAINLESS STEEL, SUPERALLOYS.

ISO	MATERIAL	HARDNESS HB	CUTTING SPEED M/MIN	FEED MM/TOOTH CUTTING DIAMETERS						
				1.5-3	3-5	5-7	7-9	9-11	11-14	14-20
P	NON-ALLOY STEEL FREE MACHINING STEEL	130	70-130	0.03	0.04	0.06	0.07	0.09	0.09	0.12
	LOW CARBON ALLOY STEEL	200	60-120	0.02	0.04	0.05	0.06	0.08	0.08	0.10
	HIGH CARBON ALLOY STEEL	240	60-110	0.02	0.03	0.04	0.05	0.05	0.05	0.08
	TOOL STEEL CAST STEEL	270	60-100	0.02	0.03	0.04	0.05	0.05	0.05	0.06
	HEAT TREATED STEEL	400	50-80	0.01	0.02	0.03	0.03	0.04	0.04	0.05
M	STAINLESS STEEL : (300 ,303,304,316)	200	70-100	0.02	0.02	0.03	0.04	0.05	0.05	0.07
	STAINLESS STEEL : (400 ,420, 440)	240	70-90	0.02	0.02	0.03	0.04	0.04	0.04	0.06
	PH, 15-5 PH, 13-8MO PH 17-4	400	60-80	0.015	0.02	0.02	0.03	0.03	0.03	0.04
K	GREY CAST IRON	190	60-110	0.02	0.03	0.06	0.07	0.08	0.09	0.11
	NODULAR CAST IRON	180	60-90	0.02	0.03	0.05	0.06	0.08	0.09	0.12
	MALLEABLE CAST IRON	240	60-90	0.02	0.02	0.03	0.05	0.07	0.08	0.11
N	WROUGHT ALUMINUM: (2024, 6061, 7075...)	80	80-300	0.03	0.04	0.06	0.07	0.10	0.13	0.15
	CAST ALUMINUM :	90	100-300	0.03	0.04	0.06	0.07	0.11	0.13	0.16
	COPPER ALLOYS: BRASS, BRONZE, COPPER SILICON	100	60-250	0.03	0.04	0.06	0.07	0.11	0.13	0.16
	NON METALIC : Rubber, Polypropylene, Thermoplastics (PVC), Thermosetting Plastics (FIBERGLASS), Polyamides,		100-400	0.05	0.06	0.08	0.09	0.13	0.15	0.18
S	TITANIUM : PURE TITANIUM: 99.0Ti ALPHA ALLOYS: Ti 5Al2.5Sn BETA ALLOYS : Ti 13V11Cr3Al ALPHA-BETA ALLOYS : Ti 6Al4V		40-80 30-60 20-50 20-50	0.02 0.02 0.02 0.02	0.02 0.02 0.02 0.02	0.02 0.02 0.02 0.02	0.03 0.03 0.03 0.02	0.04 0.03 0.03 0.03	0.04 0.04 0.03 0.03	0.05 0.05 0.04 0.04
	COBALT BASE ALLOYS : STELLITE	350	20-40	0.01	0.01	0.01	0.02	0.02	0.03	0.03
	NIKEL BASE ALLOYS: INCONEL, HASTELLOY, WASPALLOY, , KOVAR	300	20-40	0.01	0.01	0.01	0.02	0.02	0.03	0.03
	HIGH TEMPRERATURE ALLOYS : IRON BASED : INCOLOY	270	25-50	0.01	0.01	0.01	0.02	0.02	0.03	0.03
H	HARDENED STEEL	HRc 56	25-50	0.01	0.01	0.02	0.02	0.02	0.03	0.03
	HARDENED CAST IRON	HRc 50	25-40	0.01	0.01	0.02	0.02	0.02	0.03	0.03

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
CHIPPING IN CUTTING EDGES	UNSTABLE CONDITIONS FEED RATE TOO HIGH DEPTH OF CUT IS TOO LARGE	CHECK TOOL AND WORKPIECE CLAMPING AND STABILITY DECREASE FEED PER TOOTH INCREASE THE NUMBER OF THREAD MILLING PASSES
EXCESSIVE WEAR	INCORRECT CUTTING SPEED INCORRECT FEED PER TOOTH INSUFFICIENT COOLANT	DECREASE CUTTING SPEED INCREASE FEED PER TOOTH CHECK STABILITY INCREASE THE COOLANT FLOW CHANGE TO CLIMB MILLING
VIBRATIONS	CUTTING SPEED TOO HIGH INCORRECT TOOL AND WORKPIECE INSTALLATION LARGE DEPTH OF CUT STABILITY : TOOL/MACHINE, WORKPIECE/WORKPIECE CLAMPING CONCENTRICITY :	CHANGE CUTTING SPEED CHECK STABILITY OF WORKPIECE CHANGE TO NUMBER OF PASSES MAKE SURE TOOL OVERHANG IN THE HOLDING DEVICE AS SHORT AS POSSIBLE
BAD SURFACE FINISH ON WORKPIECE		INCREASE CUTTING SPEED DECREASE FEED PER TOOTH CHECK STABILITY AND OVERHANG OF TOOLS
SMALL DIFFERENCE BETWEEN GAUGES (GO/NOT GO)	RATIO TOO CLOSE (TOOL CUTTING DIAMETER/ THREAD DIAMETER)	CHOOSE TOOL WITH SMALLER CUTTING DIAMETER